

# Eliza C. Heery

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## EDUCATION

- 2017**      **PhD – Biology**, University of Washington, Seattle, WA (GPA: 3.96)  
*Dissertation Title:* “Benthic subtidal assemblages and ecological processes in urbanized seascapes of Puget Sound, Washington, USA.”  
*Advisor:* Kenneth P. Sebens
- 2007**      **MS – Fisheries Science**, Virginia Tech, Blacksburg, VA (GPA: 3.93)  
*Thesis Title:* “The impact of bias in length frequency data on an age structured fisheries stock assessment model.”  
*Advisor:* James M. Berkson
- 2004**      **BS – Biology**, Emory University, Atlanta, GA (GPA: 3.62)  
*Senior Project Title:* “The formation and development of an artisanal longline fishery in Grenada, Eastern Caribbean.”
- 2001-2002**      **Three Seas Program**, Northeastern University, Friday Harbor, WA and Discovery Bay, Jamaica (GPA: 3.81)

## PROFESSIONAL EXPERIENCE

- 2017-present**      **Postdoctoral Research Fellow**, Experimental Marine Ecology Laboratory, Department of Biological Sciences, National University of Singapore, Singapore. *PI:* Peter Todd
- 2016**      **Visiting Researcher**, School of Biological, Earth and Environmental Science, University of New South Wales, Sydney, Australia. *Host:* Emma Johnston  
**Participant**, ECORES (Developing ecosystem-based solutions for resilient European harbours and coastal waterfronts). *Organizer:* Laura Airoidi  
**Participant**, Working Group 2 – Meta-Analysis Project, World Harbour Project, Sydney Institute of Marine Science, Sydney, Australia. *Organizer:* Elizabeth Strain
- 2015**      **Research Assistant**, Pelagic Ecosystem Functioning Apprenticeship, Friday Harbor Laboratories, University of Washington, Friday Harbor, WA.  
**Research Consultant**, Perkins+Will Global, “Research on adaptable and resilient urban forms with health and wellbeing outcomes and returns on investment.” *Research Lead:* David Green
- 2012-2014**      **Graduate Fellow**, IGERT Program on Ocean Change, University of Washington, Seattle, WA.
- 2012**      **Delegate**, Ocean Exchange, Savannah, GA.
- 2008-2010**      **Statistician**, Pacific States Marine Fisheries Commission, Northwest Fisheries Science Center (NWFSC), NOAA, Seattle, WA.
- 2007**      **Research Technician**, Sebens Lab, Friday Harbor Laboratories, University of Washington, Friday Harbor, WA.
- 2004-2007**      **Research Assistant**, Department of Fisheries and Wildlife, Virginia Tech, Blacksburg, VA.
- 2002-2003**      **Undergraduate Fellow**, Ethics and Servant Leadership Program, Emory University, Atlanta, GA.
- 2002**      **Research Intern**, Marine Science Department, Chulalongkorn University, Bangkok, Thailand.
- 1999-2001**      **Intern**, California Academy of Science, Education Department, San Francisco, CA.

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## TEACHING EXPERIENCE

- 2017**      **Instructor**, Introduction to Marine Biology (Biol/Fish/Ocean 250), School of Aquatic and Fisheries Sciences, University of Washington (Summer 2017)
- Teaching Assistant**, Marine Botany (Biol 445), Friday Harbor Laboratories, University of Washington (Spring 2017)
- Instructor**, Topics in Sustainable Fisheries (Fish 478), School of Aquatic and Fisheries Sciences, University of Washington (Winter 2017)
- 2016**      **Instructor of Record**, Marine Ecological Processes (Biol 423), Biology Department, University of Washington (Fall 2016)
- Teaching Assistant**, Marine Botany (Biol 445), Friday Harbor Laboratories, University of Washington (Spring 2016)
- 2015**      **Guest Lecturer**, Marine Biology Seminar (FHL 490), Friday Harbor Laboratories, University of Washington (Fall 2015)
- Instructor**, Marine Biology (BIOL 110) and Oceanography (OCEAN 101), Highline Community College, Des Moines, WA (Summer 2015)
- Teaching Assistant**, Evolution and Human Behavior (Honors 221), Honors Program, University of Washington (Winter 2015)
- 2014**      **Teaching Assistant**, Foundations in Evolution and Systematics (Biol 354), Biology Department, University of Washington (Fall 2014)
- Graduate Field Instructor**, Garfield High School Oceanography Field School, Maui, HI (Spring 2014)
- Teaching Assistant**, Foundations in Ecology (Biol 356), Biology Department, University of Washington (Winter 2014)
- 2014-2016**      **Capstone Supervisor**, UW SAFS capstone program
- Michealene Corlett, Topic: Intertidal communities on artificial structures in Cesenatico, Italy. (Graduation: Spring 2017)
- Michelle Louie, Topic: "Food consumption and growth rates of juvenile sea urchins, *Strongylocentrotus droebachiensis*, with varying food types." (Graduation: Spring 2015)
- Amy Green: "Analysis of *Enteroctopus dofelinei* (giant Pacific octopus) midden contents from artificial reef den sites in Puget Sound." (Graduation: Fall 2014)
- 2013**      **Graduate Field Instructor**, Garfield High School Oceanography Field School, Maui, HI (Spring 2013)
- 2011-2012**      **GK-12 Fellow**, Biology and Honors Pre-Calculus, Roosevelt High School, NSF & Seattle Public Schools
- 2011**      **Teaching Assistant**, Invertebrate Zoology (Biol 434), Friday Harbor Laboratories, University of Washington (Summer 2011)
- Teaching Assistant**, Introductory Biology (Biol 180 & 220), Biology Department, University of Washington (Winter & Spring 2011)
- 2009**      **Instructor**, Pacific Northwest Field Ecology Course, Wildlands Studies (California State University Monterey Bay, Fall 2009)
- 2007**      **Instructor**, Belize Field Ecology Course, Wildlands Studies (CSU Monterey Bay, Summer 2007)
- 2005**      **Teaching Assistant**, Marine Conservation Biology Seminar, Department of Fisheries and Wildlife, Virginia Tech (Fall 2005)

**Teaching Assistant**, Marine Resource Population Dynamics Workshop, NMFS RTR Unit, Mote Marine Lab (Winter 2005)

**2004 Undergraduate Teaching Fellow**, PRISM Program, Emory University (Spring 2004)

## PUBLICATIONS

**Heery, EC** and KP Sebens. In press. Artificial structures as a source of elevated detrital loads for natural sedimentary environments. Bulletin of Marine Science.

**Heery, EC** and KP Sebens. In press. Chapter 10. The North-East Pacific: Interactions on subtidal hard substrata. In (Eds) Hawkins, S.J., L.B. Firth, K. Bohn, and G.A. Williams. *Interactions in the Marine Benthos – A Regional and Habitat Perspective*. Systematics Association Special Volume Series, Cambridge University Press.

**Heery, EC**, BW Hoeksema, NK Browne, JD Reimer, Ang PO, Huang D, DA Friess, Chou LM, Loke LHL, P Saksena-Taylor, N Alsagoff, T Yeemin, M Sutthacheep, Vo ST, AR Bos, GS Gumanao, MAS Hussein, Z Waheed, DJW Lane, O Johan, A Kunzmann, J Jompa, Suharsono, D Taira, AG Bauman, PA Todd. In press. Urban coral reefs: Degradation and resilience of hard coral assemblages in coastal cities of East and Southeast Asia. Marine Pollution Bulletin.

Loke, LHL, **EC Heery**, and PA Todd. In press. Chapter 29. Shoreline Defenses. In (Ed) C Sheppard. *World Seas: An Environmental Evaluation*. Academic Press.

Hayes, AL, **EC Heery**, E Maroon, AK McClaskey, and CC Stawitz. 2018. The role of scientific expertise in local adaptation to projected sea level rise. Environmental Science & Policy 87: 55-63.

**Heery, EC**. 2018. Reduced macrofauna diversity and abundance in response to red macroalgal detritus. Journal of Experimental Marine Biology and Ecology 505: 1-8.

**Heery, EC**, AY Green, BE Feist, and KP Sebens. 2018. Urbanization-related distribution patterns and habitat-use by giant Pacific octopus (*Enteroctopus dofleini*). Urban Ecosystems, pp.1-13.

Strain, EMA, C Olabarria, M Mayer-Pinto, V Cumbo, RL Morris, AB Bugnot, KA Dafforn, **EC Heery**, LB Firth, P Brooks, and MJ Bishop. 2017. Eco-engineering urban infrastructure for marine and coastal biodiversity: which interventions have the greatest ecological benefit? Journal of Applied Ecology 55(1): 426-441.

**Heery, EC**, MJ Bishop, L Citchley, AB Bugnot, L Airoidi, M Mayer-Pinto, EV Sheehan, RA Coleman, LHL Loke, EL Johnston, V Komyakova, RL Morris, EMA Strain, LA Naylor, and KA Dafforn. 2017. Identifying the consequences of ocean sprawl for sedimentary habitats. Journal of Experimental Marine Biology and Ecology 492: 31-48.

**Heery, EC** and JM Cope. 2014. Co-occurrence of bycatch and target species in the groundfish demersal trawl fishery of the U.S. west coast; with special consideration of rebuilding stocks. Fishery Bulletin 112: 36-48.

Bellman, MA and **EC Heery**. 2013. Discarding and fishing mortality trends in the U.S. west coast groundfish demersal trawl fishery. Fisheries Research 147: 115-126.

Bellman, MA, **EC Heery**, J Jannot, and J Majewski. 2010. Estimated discard and total catch of selected groundfish species in the 2009 U.S. west coast fisheries. West Coast Groundfish Observer Program. National Marine Fisheries Service, NWFSC, 2725 Montlake Blvd E., Seattle, WA 98112.

**Heery, EC**, MA Bellman, and J Majewski. 2010. Estimated bycatch of marine mammals, seabirds, and sea turtles in the 2002-2008 U.S. west coast commercial groundfish fishery. West Coast Groundfish Observer Program. NWFSC, 2725 Montlake Blvd E., Seattle, WA 98112.

Bellman, MA, **EC Heery**, and J Majewski. 2010. Observed and estimated total bycatch of green sturgeon in the 2002-2008 U.S. west coast groundfish fisheries. West Coast Groundfish Observer Program. NWFSC, 2725 Montlake Blvd E., Seattle, WA 98112.

Bellman, MA, **EC Heery**, and J Majewski. 2010. Observed and estimated total bycatch of salmon in the 2008 U.S. west coast groundfish fisheries. West Coast Groundfish Observer Program. NWFSC, 2725 Montlake Blvd E., Seattle, WA 98112.

Bellman, MA, **EC Heery**, and J Majewski. 2009. Estimated Discard and Total Catch of Selected Groundfish Species in the 2008 U.S. West Coast Fisheries. West Coast Groundfish Observer Program. National Marine Fisheries Service, NWFSC, 2725 Montlake Blvd E., Seattle, WA 98112.

**Heery, EC**, and MA Bellman. 2009. Observed and Estimated Total Discard of Pacific Halibut in the 2002-2008 U.S. West Coast Groundfish Non-Nearshore Fixed Gear Fishery. National Marine Fisheries Service, NWFSC, 2725 Montlake Blvd E., Seattle, WA 98112.

**Heery, EC**, MA Bellman, and J Hastie. 2009. Observed and Estimated Total Bycatch of Salmon in the 2007 U.S. West Coast Groundfish Fisheries. National Marine Fisheries Service, NWFSC, 2725 Montlake Blvd E., Seattle, WA 98112.

Bellman, MA, **EC Heery**, and J Hastie. 2008. Estimated Discard and Total Catch of Selected Groundfish Species in the 2007 U.S. West Coast Fisheries. National Marine Fisheries Service, NWFSC, 2725 Montlake Blvd E., Seattle, WA 98112.

**Heery, EC** and J Berkson. 2009. Systematic errors in length frequency data and their effect on age-structured stock assessment models and management. Transactions of the American Fisheries Society 138: 218-232.

### **Publications In Review or In Revision**

Bugnot, AB, M Pinto-Mayer, E Johnston, **EC Heery**, L Critchley, E Sheehan, E Strain, R Morris, LHL Loke, L Airodli, M Bishop, R Coleman, KA Dafforn. In revision. Mapping global impacts of marine built infrastructure: current trends and future projections. Frontiers in Ecology and the Environment.

**Heery, EC**, KA Dafforn, JA Smith, S Ushiyama, M Pinto-Mayer. In review. Not all artificial structures are created equal: Pillings linked to greater ecological and environmental change in sediment communities than seawalls. Marine Environmental Research.

### **PRESENTATIONS**

**Heery, EC**, NK Browne, BW Hoeksema, JD Reimer, PO Ang, DA Friess, D Huang, LM Chou, AG Bauman, LHL Loke, and PA Todd. 2018. Urban coral reefs of East and Southeast Asia: A case study approach. Oral presentation at the 5<sup>th</sup> *International Marine Conservation Congree* (June 2018), Kuching, Malaysia.

**Heery, EC** and PA Todd. 2018. Designing artificial structures with an eye on detrital production and flux. Invited Speaker: 2<sup>nd</sup> *International Workshop on Eco-Shoreline Designs for Sustainable Coastal Development* (May 2018), Hong Kong.

**Heery, EC**. 2018. Beyond the water's edge. TEDx, UWCSEA Dover. Singapore.

**Heery, EC**. 2017. Characterizing productivity in the tropical rocky intertidal. Oral Presentation at the 1<sup>st</sup> *Singapore-Hong Kong Hard Shore Ecology Workshop* (November 2017), Hong Kong.

**Heery, EC**. 2017. Benthic subtidal assemblages in urbanized seascapes of Puget Sound. Public Defense Seminar, University of Washington, Seattle, WA.

**Heery, EC**. 2017. Urbanization-related distribution patterns and habitat use by giant Pacific octopus (*Enteroctopus dofleini*). Invited Speaker: Boeing SCUBA Club (June 2017), Issaquah, WA.

**Heery, EC**. 2017. City dwellers: Benthic subtidal assemblages in urbanized seascapes of Puget Sound. Seminar Speaker, Friday Harbor Laboratories, WA.

**Heery, EC**, AY Green, BE Feist, and KP Sebens. 2017. Urbanization-Related Distribution Patterns and Habitat Use by *Enteroctopus dofleini*. Oral Presentation at the 2<sup>nd</sup> Semiannual Seattle Aquarium Octopus Symposium, Seattle, WA.

**Heery, EC** and KP Sebens. 2015. Urban infauna: The effect of material fluxes from artificial structures on soft sediment species assemblages in urban, subtidal landscapes. Oral Presentation at the 55th annual meeting of the Estuarine Coastal Sciences Association, London, UK.

**Heery, EC** and KP Sebens. 2015. The effect of material fluxes from artificial structures on neighboring infaunal communities in an urban subtidal landscape. Oral Presentation at the Aquatic Biodiversity and Ecosystems Conference, Liverpool, UK.

**Heery, EC** and KP Sebens. 2015. Benthic Communities in an Urbanized World. Seminar Speaker, Plymouth Marine Laboratory, UK.

**Heery, EC.** 2015. "Equity" in Urban Marine Ecosystems. Invited Speaker: Equitable Bike Ramble, Organized by the AIA Seattle Urban Design Forum and Cascadia Bicycle Club (September 2015), Seattle, WA.

**Heery, EC.** 2015. Benthic subtidal communities in an urbanized world. Seminar Speaker, Friday Harbor Laboratories, WA.

**Heery, EC** and KP Sebens. 2014. Material fluxes from subtidal man-made structures to adjacent soft sediment habitats in the urban subtidal. Oral Presentation at the 95th annual Meeting of the Western Society of Naturalists, Tacoma, WA.

**Heery, EC** and KP Sebens. 2014. Subtidal riprap in Puget Sound: Its ecological structure and function, and its impact on adjacent soft sediment environments. Poster Presentation at the 2014 Salish Sea Ecosystem Conference, Seattle, WA.

**Heery, EC.** 2014. SCUBA Research in the Urban Subtidal. Invited Speaker: Being SCUBA Club (June 2014), Renton, WA.

**Heery, EC.** 2014. Urban Marine Ecosystems. Invited Speaker: Seattle Arboretum (April 2014), Seattle, WA.

**Heery, EC** and J Berkson. 2007. The impact of biased length frequency data on age-structured stock assessment models. Oral Presentation at the 137th annual meeting of the American Fisheries Society, San Francisco, CA.

**Heery, EC** and J Berkson. 2006. The impact of biased length frequency data on marine population models. Poster Presentation at the 91st annual meeting of the Ecological Society of America, Memphis, TN.

Chavanich, S, V Viyakam, **EC Heery** and C Raksataub. 2003. Effect of densities of the sea cucumber, *Holothuria atra*, on chlorophyll concentrations in sediments. Poster Presentation at the 32nd annual Benthic Ecology Meeting, Groton, CT.

## GRANTS AND AWARDS

- |             |  |
|-------------|--|
| <b>2016</b> | <b>National Science Foundation</b> , East Asia Summer Institute (\$5000)<br><b>Australian Academy of Science</b> , East Asia Summer Institute (\$2000)<br><b>IGERT Program on Ocean Change</b> , Research Grant (\$2500) |
| <b>2014</b> | <b>R.T. Paine Experimental and Field Ecology Award</b> , Research Grant (\$2500)<br><b>IGERT Program on Ocean Change</b> , International Research Grant (\$2000)   |
| <b>2013</b> | <b>R.T. Paine Experimental and Field Ecology Award</b> , Research Grant (\$5000)   |
| <b>2012</b> | <b>National Science Foundation IGERT</b> , Program on Ocean Change Fellowship (2 years of support)<br><b>Biology-Friday Harbor Award</b> (\$1250)  |
| <b>2011</b> | <b>National Science Foundation GK-12</b> , Graduate STEM Fellowship (1 year of support)  |
| <b>2004</b> | <b>NMFS-RTR Research Assistantship</b> , Virginia Tech (3 years of support)  |
| <b>2004</b> | <b>National Science Foundation GK-12</b> , Undergraduate STEM Fellowship (Emory University PRISM Program, 1 semester of support)   |
| <b>2003</b> | <b>Institute for International and Comparative Studies</b> , International Scholars Grant (\$3000)   |

## HONORS AND PROFESSIONAL MEMBERSHIPS

American Fisheries Society  
Ecological Society of America  
National Honors Society  
Phi Kappa Phi

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Western Society of Naturalists

## **CERTIFICATIONS**

Washington State Boater Training (2015)  
Divemaster (National Association of Underwater Instructors, 2004)  
Scientific Diver (American Association of Underwater Science, 2001)  
Rescue Diver (Professional Association of Diving Instructors, 2001)  
Advanced Open Water Diver (Professional Association of Diving Instructors, 1999)  
Open Water Diver (Professional Association of Diving Instructors, 1998)  
CPR/First Aid and Oxygen Certification (Updated Regularly)

## **VOLUNTEER WORK**

Diver, Marine Science and Technology Center (MaST) Carnival on the Dock (2014)  
Holiday Gift Volunteer, YWCA, Seattle, WA (2013)  
Diver, Bainbridge High School Underwater Robot Competition (2013)  
Tutor, Youth Tutoring Program, Seattle, WA (2008)  
Webmaster, Virginia Tech Chapter of the American Fisheries Society, Blacksburg, VA (2005-2006)  
Tutor, Refugee Family Services, Clarksville, GA (2002-2004)  
Intern, Hands On Atlanta, Atlanta, GA (2003)  
Lab Technician, Dugdale Lab, Romberg Tiburon Center, Tiburon, CA (1998-2000)

*References furnished upon request*